Chaetogramma, a new genus of Trichogrammatidae

(Hymenoptera: Chalcidoidea)

RICHARD L. DOUTT[1]

University of California, Berkeley

Minute Hymenoptera form a common component of the aerial insect fauna, consequently the suction traps designed to sample this aerial plankton frequently capture large series of trichogrammatids and mymarids. Although this collecting technique does not reveal host relationships, it does yield information on the seasonal flight activities and dispersal patterns of these parasitic wasps. Very importantly it adds interesting new taxa to these groups, for some species have not otherwise been taken. For example, two of the species described herein are known only from suction trap collections in South Africa, and most of the California specimens representing the third species were also taken in a suction trap.

Chaetogramma, new genus

This genus keys out near *Xiphogramma* in the classification of Trichogrammatidae proposed by Doutt and Viggiani (1968), but it differs in lacking the large sabre-shaped valvulae and greatly exserted ovipositor so characteristic of *Xiphogramma* (Fig. 9). While the forewings of both genera have abundant discal setae the vein track patterns are different (compare Figs. 2 and 8). In *Xiphogramma* there are two distinct funicle segments while in *Chaetogramma* the funicle is either a single segment (Fig. 3) or one that is partially divided (Fig. 1). *Chaetogramma* has a single annellus while *Xiphogramma* has a minute second annellus fused to the base of the first funicle segment (Fig. 7). Both *Xiphogramma* and *Chaetogramma* have toruli low on face near lower ocular line; vertex wrinkled, with prominent setae (Figs. 5 and 6); maxillary palpi one segmented, elongate; hypogynium well developed.

Doutt and Viggiani (1968) in discussing *Xiphogramma* mention that "A species from California exhibits all the characteristics of *Xiphogramma* except the long ovipositor and sabre-shaped valvulae. This species probably represents a new subgenus, but until more material is available the genus *Xiphogramma* is not being divided." I now believe this species represents a new genus, *Chaetogramma*, and it is the type species described as follows:

Chaetogramma occidentalis, new species

Female.—Body color dark brown, propodeum bright yellow, apical abdominal tergite yellow, antennae light brown, eyes red, face and vertex golden, legs dark

[1] Present address: 9240 S. Riverbend Ave., Parlier, CA 93648.

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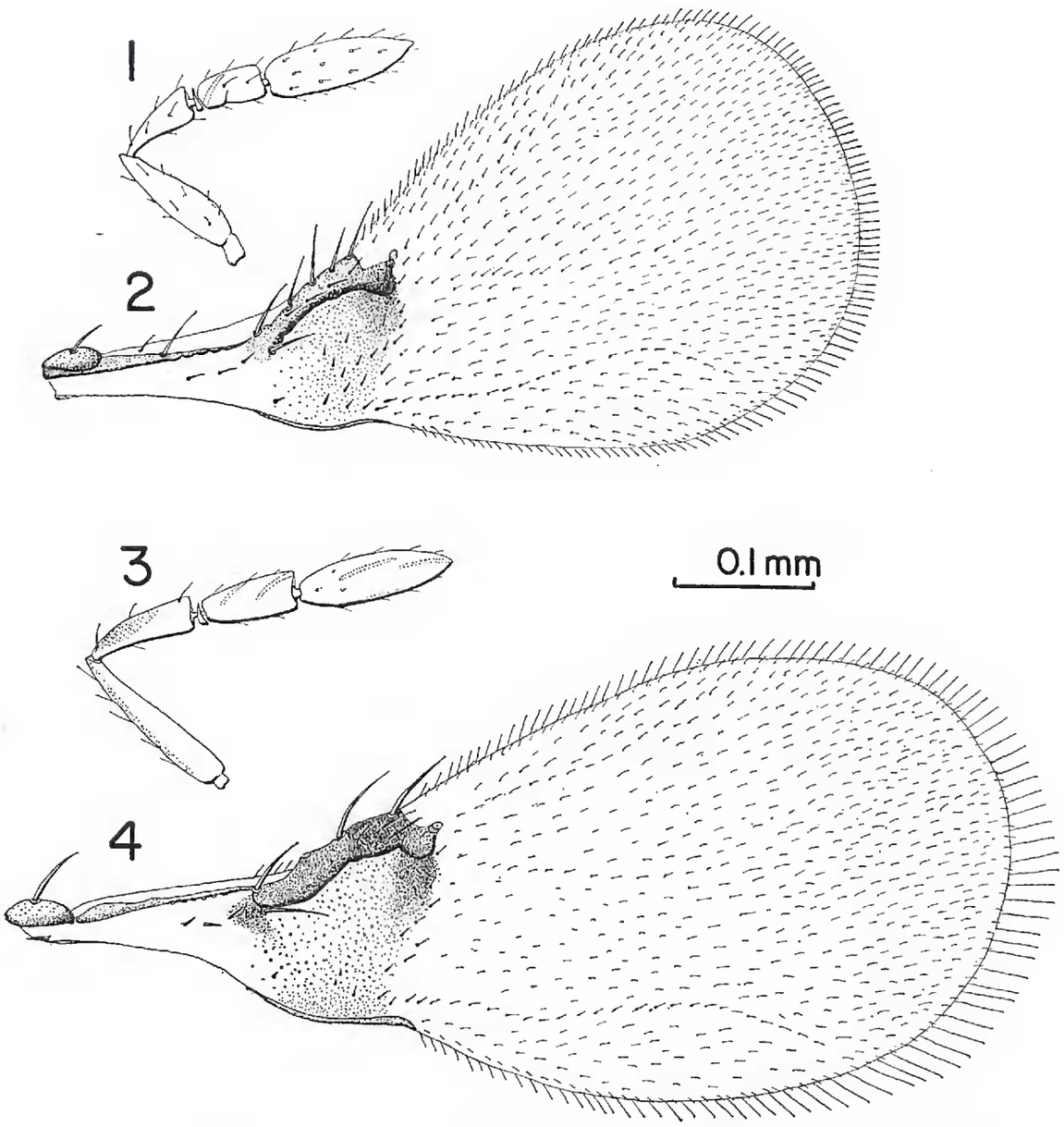


FIGS. 1–2. *Chaetogramma occidentalis*. Fig. 1. Antenna. Fig. 2. Forewing.
FIGS. 3–4. *C. pretoriensis*. Fig. 3. Antenna. Fig. 4. Forewing.

brown except apices of femora, tibiae pallid. Venation brown except for light band across marginal vein; wings hyaline except brown under venation. Antennae (Fig. 1), scape and club subequal length, pedicel slightly longer than funicle, latter partially divided, basal portion with oblique sensorium. Head (Fig. 6) rounded, convex frontally but face impressed to receive antennal scapes; toruli low near lower ocular line; compound eyes with prominent ommatidia, relatively fewer than in *Xiphogramma* (compare Figs. 5 and 6); vertex with coarse, wrinkled sculpture; mandibles with two sharp teeth, third blunt; maxillary palpi one segmented. Scutum and scutellum with large prominent bristles; forewings broadly rounded apically, vein tracks as shown in Fig. 2. Ovipositor originating at base of abdomen, between hind coxal bases, strongly developed but only slightly exserted; hypogynium prominent.

Male.—Similar to female, except abdomen entirely dark brown.

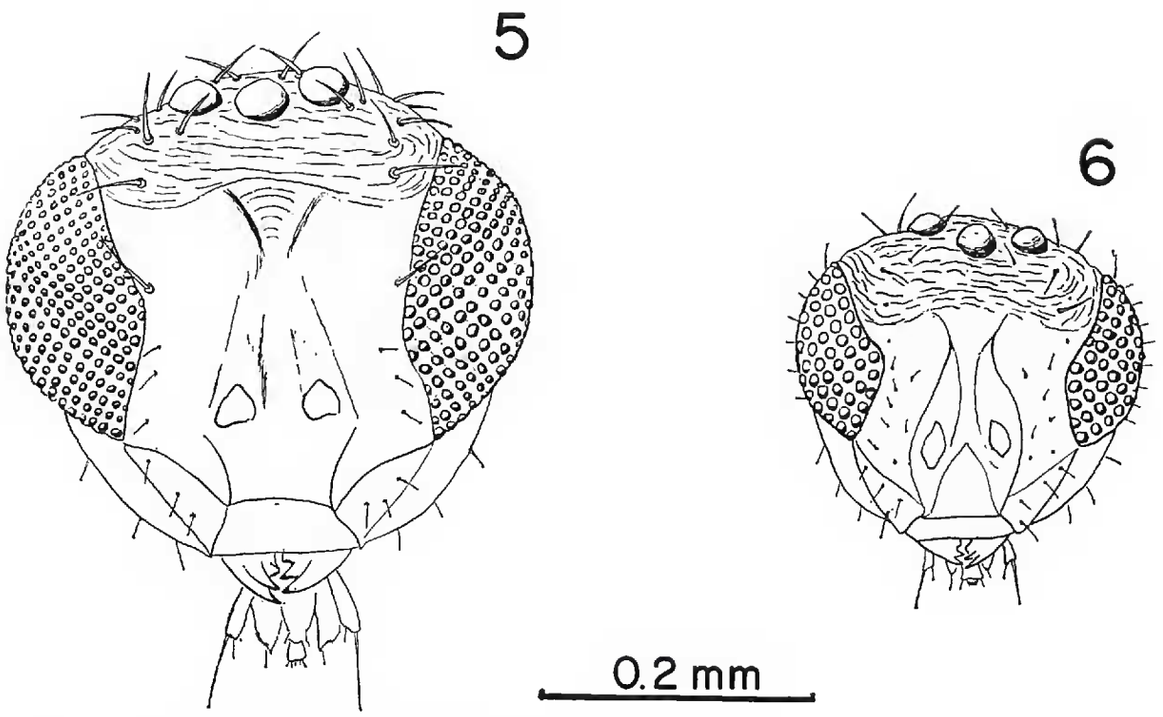


FIG. 5. *Xiphogramma anneckei*, head.
FIG. 6. *Chaetogramma occidentalis*, head.

This species is distinguished by its partially divided funicle segment, dark brown body color, and broadly rounded forewings.

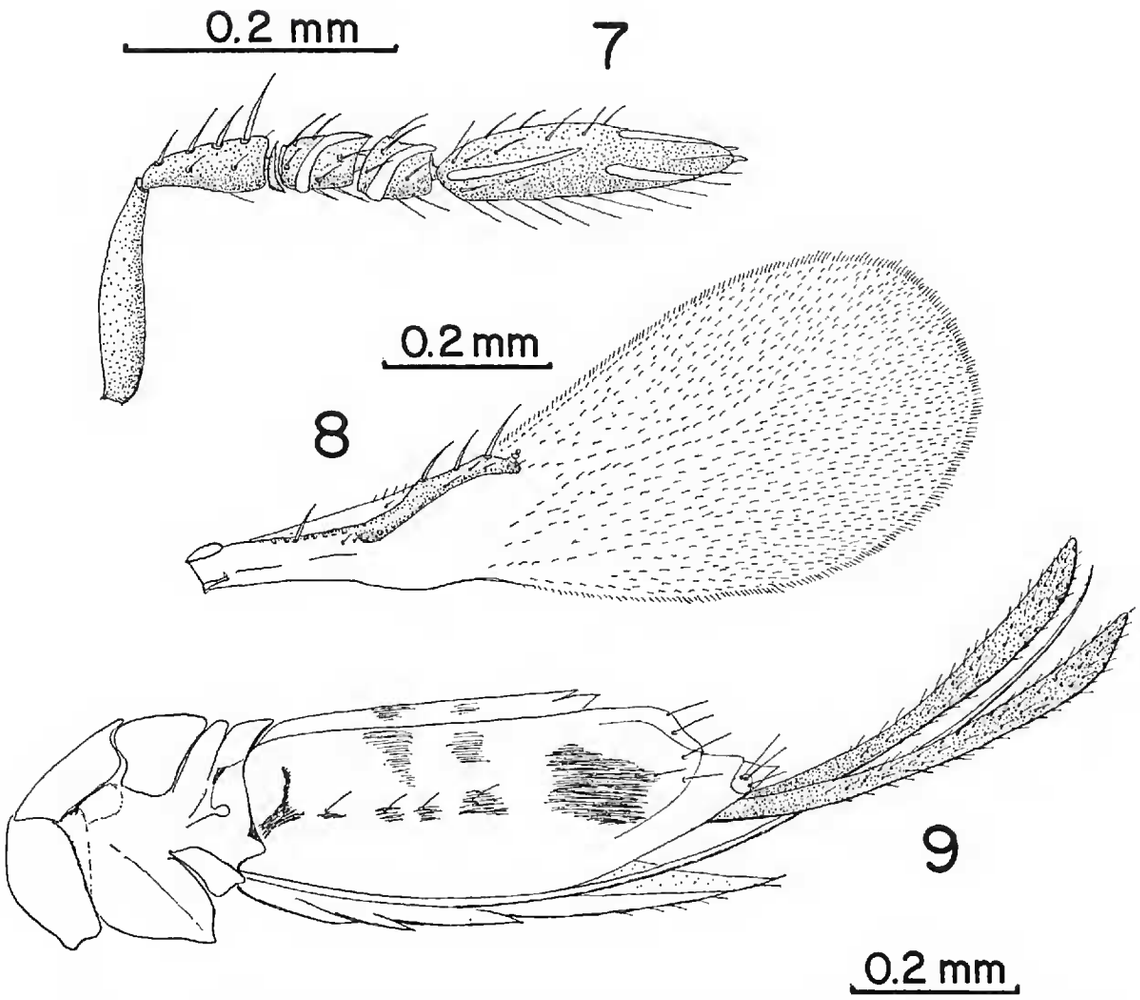
Holotype female, PARLIER, FRESNO COUNTY, CALIFORNIA, suction trap in citrus, 1 September 1973, R. L. Doutt. Allotype, two female paratypes, same data as holotype except collected 19 August 1973. Two female paratypes, same data, collected 17 August 1973. Additional paratypes include two females, by suction trap, U. C. Botanical Garden, Berkeley, Alameda County, California, 15 June 1966, and one female 16 June 1966, F. E. Skinner. Two females, on *Distichlis spicata*, Altamont Pass, Alameda County, California, 16 April 1964, R. L. Doutt. One female by sweeping, Graton, Sonoma County, California, 11 April 1947, R. L. Doutt. One female on hopleaf, Wheatland, Yuba County, California, 9 July 1954, K. S. Hagen. Two males, one female, on low vegetation, Edison, Kern County, California, 25 May 1953, C. E. Kennett.

Holotype, allotype to be deposited California Academy of Sciences, paratypes at U. S. N. M., and Division of Biological Control, University of California.

Chaetogramma pretoriensis, new species

Female.—Basic body color light yellow with 4 brown bands on abdomen, brown markings on thoracic pleurae, propodeum, base of ovipositor. Head yellow with brown markings in malar space, eyes and ocelli bright red. Club and funicle golden; brown band across scape and base of pedicel. Tarsi brown, tibiae light brown, trochanters and apices of coxae and femora pale. Light band across marginal vein; apex of marginal and stigmal vein brown; forewing from base to end of venation light brown, remainder hyaline.

Antenna (Fig. 3) with single funicle segment bearing two obliquely oriented



FIGS. 7–9. *Xiphogramma anneckei.* Fig. 7. Antenna. Fig. 8. Forewing. Fig. 9. Body, lateral view.

sensoria. Scape longer than club. Forewing (Fig. 4) with 3 distinct vein tracks, abundant discal setae. Ovipositor half length of abdomen, not exserted.

Male.—Unknown.

This species is distinguished from *C. occidentalis* by its yellow color, abdominal cross bands, undivided funicle, shorter ovipositor, forewings not broadly rounded, and scape longer than club.

Holotype female. PRETORIA, SOUTH AFRICA, in suction trap, April 1957, D. P. Annecke. One paratype female same data as holotype. One paratype female same data but collected March 1958.

Holotype at Plant Protection Research Institute, Pretoria. Paratypes at Division of Biological Control, University of California.

Xiphogramma anneckei, new species

Female.—Body basically yellow with brown markings. Anterior half scutum, entire scutellum light brown; thoracic pleurae edged with dark brown. Abdomen with brown markings on basal tergite, two distinct dark bands across mid-abdomen, two large brown blotches on each side of abdomen near apex. Valvulae dark

brown, in strong contrast with yellow venter of abdomen. Head yellow gold, eyes and ocelli crimson; malar area brown, mandibles brown. Ventral aspect of scape pale, rest of antenna dark brown except pale, obliquely oriented sensoria on funicle segments. Legs testaceous. Wings hyaline with smoky area beneath brown venation.

Head (Fig. 5) with wrinkled vertex, prominent bristles, toruli low on face but slightly above line of lower eye margin, maxillary palpi of single segment, mandibles with 3 teeth. Antennae (Fig. 7); scape slender, shorter than club, pedicel with prominent dorsal spines; two annelli, 2nd closely appressed to funicle 1; two funicles, first slightly longer than second, each with prominent, obliquely oriented sensorium. Forewings (Fig. 8), wing blade densely setose. Abdomen (Fig. 9) much longer than thorax; ovipositor very long extending forward between hind coxal bases, strongly exserted and curved upward. Two large, exserted valvulae characteristic of genus. Hypogynium well developed extending to apex of abdomen. Fore coxae with bristles.

Male.—Color similar to female, except scutellum golden, thoracic pleurae darker brown, apex of abdomen brown. Antennae similar to female.

This genus has been known only from four female specimens of *X. holorhoptra* Nowicki taken on window panes of an electric railway, Warsaw, Poland (Nowicki, 1940). *X. anneckei* differs from *X. holorhoptra* by its yellow color and pattern of brown markings, head as long as wide, scape slender and not swollen at base, toruli slightly above lower eye margin, and marginal vein not widened apically.

This large, handsome African species is dedicated to the distinguished South African entomologist, Dr. David P. Annecke.

Holotype female. PRETORIA, SOUTH AFRICA, in suction trap, March 1958, D. P. Annecke. Allotype same data as holotype except collected April 1957. Female paratypes same data except collected as follows: nine in April 1957, two in February 1957, five in April 1958, and two in March 1958.

Holotype and allotype at Plant Protection Research Institute, Pretoria. Paratypes at California Academy of Sciences, U.S.N.M., and Division of Biological Control, University of California.

LITERATURE CITED

DOUTT, R. L. AND G. VIGGIANI. 1968. The classification of the Trichogrammatidae (Hymenoptera: Chalcidoidea). Proc. Calif. Acad. Sci., 35(20): 477–586.

NOWICKI, S. 1940. Descriptions of new genera and species of the family Trichogrammidae (Hym. Chalcidoidea) from the Palearctic region, with notes—supplement. Zeit. angew. Entomol., 26(4): 624–663.